



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,549	12/18/2000	Cheng-Jen Lin	3313-0249P-SP	1515

7590 04/06/2005

BIRCH, STEWART, KOLASCH & BIRCH, LLP  
P.O. Box 747  
Falls Church, VA 22040-0747

EXAMINER
----------

SMITH, JEFFREY A

ART UNIT	PAPER NUMBER
----------	--------------

3625

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/737,549

Applicant(s)

LIN ET AL.

Examiner

Jeffrey A. Smith

Art Unit

3625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3625

**DETAILED ACTION**

***Response to Amendment***

Receipt and entry of the Amendment filed November 16, 2004 is acknowledged.

Claims 5 and 6 have been cancelled.

Claims 1 and 14 have been amended.

Claims 1-4, and 7-17 are pending.

An action on the merits of claims 1-4, and 7-17 follows.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a

Art Unit: 3625

patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970).

Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See

Art Unit: 3625

*State Street Bank & Trust Co. v. Signature Financial Group, Inc.*  
149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the

Art Unit: 3625

"technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the

Art Unit: 3625

invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, claim 14 does not clearly establish that the technology recited in the body of the claim is involved in the application of the method steps in a non-trivial manner. The obtaining of information steps and the transmitting step is considered a trivial application of technology. The acts associated with the various modules do not clearly establish the positive execution of the acts associated therewith (see discussion below under 35 USC 112, second paragraph). And the providing and estimating steps are not recited as being applied to any particular technology. The Examiner's recommendation below regarding the recitation of a step of the ATP server executing a supply/demand configuration would also serve to provide a non-trivial and specific application of technology in the body of the claim.

Art Unit: 3625

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, and 7-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: the scope of the claim is not clear. Applicant lists various modules and acts that they perform. However, as formatted, it is not clear whether the acts associated with each of the modules is intended to be considered a positive recitation of a step performed as part of the method. For examination purposes, the Examiner has interpreted these acts as being positively performed as part of the method. Applicant must comment on the intent of the claim and amend the claim consistent with the intent.

Claim 1: references to "the basic initial data" are unclear. It appears that such phrase is a reference to portions of ordering information.



Art Unit: 3625

Claim 4: "the host supplier server" lacks antecedent basis.

Claims 7-11: these claims depend from a cancelled base claim. For examination purposes, these claims have been interpreted as having depended from claim 1.

Claim 12: it appears that "connecting the supply chain of the host server, the supply chain of up-, mid-, downstream suppliers" better reads as --connecting supply chain data of a host supplier server, supply chain data of up-, mid-, downstream suppliers". Applicant should review this claim in order to clearly set forth the recitations therein as well as to remove all antecedent problems.

Claim 14: it appears that "include" (at line 6) should read as --includes--.

Claim 14: this claim is of an unclear scope for the same reasons as provided above regarding the various modules and the acts they perform. This claim has been treated in like manner to that of claim 1.

Claim 14: "the HDI" (at line 14) should read as --HDI (host digital interface)--. Note language of claim 1.

Claim 14: "the supply/demand information" (at line 19) lacks antecedent basis.

Art Unit: 3625

Claim 14: it appears that "an available to promise (ATP) server" should read as --the available to promise (ATP) server--.

Claim 14: the last two steps of the method (i.e. the providing and estimating steps) appear to rely on an unrecited precursor step of the ATP server executing (i.e. attempting) a supply/demand configuration. If such execution is completed, then an SO is provided to the customer. If such execution cannot be completed, then an estimated ATP date is provided to the customer. The Examiner has interpreted the method as if a step of the ATP server executing a supply/demand configuration were positively recited prior to these last two steps. Applicant is advised to review this issue and to amend the claims as necessary.

In claim 15: it appears that "customer's request information" (at line 1) should read as --customer's demand information--.

In claim 17: "the order confirmation information" lacks antecedent basis.

***Allowable Subject Matter***

Claims 1-4, 7-17 (as interpreted) would be allowable if rewritten or amended to overcome the rejections under 35

Art Unit: 3625

U.S.C. 112, 2nd paragraph, and 35 USC 101 set forth in this Office action.

### ***Response to Arguments***

Applicant's arguments, filed November 16, 2004, with respect to the rejection(s) of claim(s) 1-4, and 7-17 under 35 USC 103 have been fully considered and are persuasive. Moreover Applicant's amendments have overcome the previous rejection under 35 USC 112, second paragraph. Therefore, these rejections have been withdrawn or overcome. However, upon further consideration, new grounds of rejection is made under 35 USC 112, second paragraph and 35 USC 101.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kumar et al. (US 2002/0042755 A1) discloses a collaborative fulfillment in a distributed supply chain environment.

Dragon et al. (U.S. Patent No. 6,625,616 B1) discloses a method and apparatus for material requirements planning.

Kennedy (GB 2,302,427 A) discloses managing available-to-promise in demand management.

Art Unit: 3625

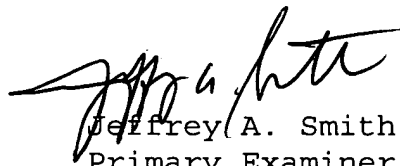
Repath, Kathleen M. et al.: "KnowledgeBase manufacturing",  
Assembly Automation, v14, n4, 1994, pages 21-25 discloses  
knowledge-based systems technology allowing manufactures to  
automate their key business process.

Art Unit: 3625

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Smith whose telephone number is 703-308-3588. The examiner can normally be reached on M-F 6:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wynn Coggins can be reached on 703-308-1344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeffrey A. Smith  
Primary Examiner  
Art Unit 3625

jas